



LINK ELECTRONICS, INC.

800 SERIES

HD TEST SIGNAL GENERATOR MODELS HDG-820 & HDG-821



MADE IN THE USA



FEATURES

- ◆ 23 different HD video formats
- ◆ 30 different test patterns
- ◆ HD analog and SDI outputs
- ◆ YUV or RGB analog outputs
- ◆ Tri-level Sync output
- ◆ AES audio generation

- ◆ 8 selectable channels to be embedded
- ◆ 2 AES outputs
- ◆ Power-up user settings
- ◆ Loadable factory defaults
- ◆ Adjustable audio frequency and amplitude
- ◆ Adjustable horizontal & vertical timing (821 only)

The HDG-820/821 series by Link Electronics is a series of broadcast High Definition Pattern Generators, providing the user with high quality, low cost system to produce HD Test Patterns. The HDG-820/821 is a self contained product for standard 19 inch rack mounting.

The HDG-820/821 is a high defintion video test pattern generator in a stand-alone one rack (RU) chassis. The unit has two serial digital outputs at 1.485GB/s and YUV-RGB analog outputs. The digital and analog outputs are simultaneous on the rear panel, and contain the same test pattern. The user may embed internal audio tones on the digital video output, if desired.

There are two audio groups supported, which allow for eight channels. The channels can be enabled on an individual basis. The internal tones generated are adjustable from 400Hz to 10KHz, 0 to -30dBFS. There are also two BNC connectors for AES output, which will allow four channels of audio for monitoring. Serial control will allow changes to be made via a PC, (the serial control is a development for a later release). There are a total of thirty test signals available, including SMPTE, EIA and Full Field Bars.

The Link Electronics product design, performance and reliability are reflected in the New-Generation of Link Electronics products. A pair of lighted push buttons and an optical rotary encoder change and select various menus. User friendly operation is a key concept of the HDG-820/821.

The 20X2 Vacuum Fluorescent Dispaly shows data for operational functions. All user controls are made from the front panel. All internal adjustments are made by potentiometers for precise and accurate settings. The user may choose to have all of the selections saved for power up defaults.

The HDG-820/821 multi-format generator can be used where various HD signals are required. Tri-level-sync has its own separate output and is on all analog component outputs, RGB or YUV.

The HDG-821 is a gen-lock unit with a pair of looping BNC connectors on the rear panel. The gen-lock version provides adjustment of H & V Timing. The HDG-820 is a non gen-lock unit.

1. 100% COLOR BARS	9. CHROMA 10 STEP	17. CHROMA MULTIBURST	25. 75% RED
2. 75% COLOR BARS	10. CHROMA RAMP	18. CHROMA SWEEP 5-15MHz	26. 75% BLUE
3. SMPTE BARS	11. SDI PATHOLOGICAL	19. CHROMA PULSE & BAR	27. 50% GRAY
4. 75% COLOR BARS/5 STEP	12. SDI EQ	20. 100% WHITE	28. BLACK
5. LUMA 5 STEP	13. SDI PLL	21. 75% YELLOW	29. LUMA ZONE PLATES
6. LUMA 10 STEP	14. LUMA MULTIBURST	22. 75% CYAN	30. CHROMA ZONE PLATES
7. LUMA RAMP	15. LUMA SWEEP 1-30MHz	23. 75% GREEN	
8. CHROMA 5 STEP	16. LUMA PULSE & BAR	24. 75% MAGENTA	

NOTE: All 30 test patterns are available with all 23 video formats.

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HDG-820/821 HIGH DEFINITION GENERATOR

OUTPUTS:

HD SDI:	Two 75Ω BNCs, 800mV ±10%
YUV or RGB:	One set of three 75Ω BNCs
Y, G, B & R	1Vpp, ±10% @ 100% Color Bar
U & V	0.7Vpp, ±10% @ 100% Color Bar
Tri-Level Sync:	One 75Ω BNC, 0.6Vpp ±10%
AES/EBU Audio	Two, AES3-ID, 75Ω BNC

REFERENCE INPUT (HDG-821 ONLY):

Analog Black Burst:	High Impedance Loop, >50K ohms
Level:	1Vpp ±3dB
Configuration:	Single ended

ELECTRICAL:

Input Power:	Auto Detection 90 to 264VAC
Frequency:	47 to 63Hz
Consumption:	12 Watts
Compliance:	Designed to meet UL Approval

ENVIRONMENTAL:

Temperature:	0° to 50°C (ambient)
Humidity:	10% to 90% non-condensing

MECHANICAL:

Dimensions (HxWxD)	1.75 inches x 19 inches x 9 inches@4.75lbs
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HD Formats

720 Progressive Formats							
Active Samples	Active Lines	Frame Rate(Hz)	Frequency	Samples	Total Lines	Standard	Smpte
1280	720	60	74.25MHz	1650	750	NTSC	296M
1280	720	59.94	74.175MHz	1650	750	NTSC	296M
1280	720	50	74.25MHz	1980	750	PAL	296M
1280	720	30	74.25MHz	3300	750	NTSC	296M
1280	720	29.97	74.178MHz	3300	750	NTSC	296M
1280	720	25	74.25MHz	3960	750	PAL	296M
1280	720	24	74.25MHz	4125	750	FILM	296M
1280	720	23.98	74.175MHz	4125	750	FILM	296M

1080 Progressive Formats

1080 Progressive Formats							
Active Samples	Active Lines	Frame Rate(Hz)	Frequency	Samples	Total Lines	Standard	Smpte
1920	1080	30	74.25MHz	2200	1125	NTSC	274M
1920	1080	29.97	74.175MHz	2200	1125	NTSC	274M
1920	1080	25	74.25MHz	2640	1125	PAL	274M
1920	1080	24	74.25MHz	2750	1125	FILM	274M
1920	1080	23.98	74.175MHz	2750	1125	FILM	274M

1080 Interlaced Formats

1080 Interlaced Formats							
Active Samples	Active Lines	Frame Rate(Hz)	Frequency	Samples	Total Lines	Standard	Smpte
1920	1080	60	74.25MHz	2200	1125	NTSC	274M
1920	1080	59.94	74.175MHz	2200	1125	NTSC	274M
1920	1080	50	74.25MHz	2640	1125	PAL	274M

1080 Progressive Segmented Frame Formats

1080 Progressive Segmented Frame Formats							
Active Samples	Active Lines	Frame Rate(Hz)	Frequency	Samples	Total Lines	Standard	Smpte
1920	1080	30	74.25MHz	2200	1125	NTSC	RP 211
1920	1080	29.97	74.175MHz	2200	1125	NTSC	RP 211
1920	1080	25	74.25MHz	2640	1125	PAL	RP 211
1920	1080	24	74.25MHz	2750	1125	FILM	RP 211
1920	1080	23.98	74.175MHz	2750	1125	FILM	RP 211

1035 Interlaced Formats

1035 Interlaced Formats							
Active Samples	Active Lines	Frame Rate(Hz)	Frequency	Samples	Total Lines	Standard	Smpte
1920	1035	60	74.25MHz	2200	1125	NTSC	260M
1920	1035	59.94	74.175MHz	2200	1125	NTSC	260M

* Analog outputs not available with 1080PsF and 1035I formats

SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE